0.a. Goal

Goal 3: Ensure healthy lives and promote well-being for all at all ages

0.b. Target

Target 3.3: By 2030, end the epidemics of AIDS, tuberculosis, malaria and neglected tropical diseases and combat hepatitis, water-borne diseases and other communicable diseases

0.c. Indicator

Indicator 3.3.2: Tuberculosis incidence per 100,000 population

0.d. Series

Not applicable

0.e. Metadata update

2022-03-31

0.f. Related indicators

Indicators associated with TB incidence: numbers: 1.1.1, 1.3.1, 2.1.1, 3.3.1, 3.4.1, 3.5.2, 3.a.1, 3.8.1, 3.8.2, 7.1.2, 8.1.1, 10.1.1, 11.1.1

0.g. International organisations(s) responsible for global monitoring

World Health Organization (WHO)

1.a. Organisation

World Health Organization (WHO)

2.a. Definition and concepts

Definition:

The tuberculosis incidence per 100 000 population is defined as the estimated number of new and relapse TB cases (all forms of TB, including cases in people living with HIV) arising in a given year,

expressed as a rate per 100 000 population.

Concepts:

Direct measurement requires high-quality surveillance systems in which underreporting is negligible, and strong health systems so that under-diagnosis is also negligible; otherwise indirect estimates are based on notification data and estimates of levels of underreporting and under-diagnosis.

2.b. Unit of measure

Number of cases per 100,000 population per year.

2.c. Classifications

Definitions and reporting framework for tuberculosis – 2013 revision (WHO/HTM/TB/2013.2). Geneva: World Health Organization; 2013 (https://www.who.int/publications/i/item/9789241505345 accessed 4 January 2021).

3.a. Data sources

Details about data sources and methods are available in annex 1 and the online technical annex published in the most recent WHO Global Tuberculosis Report at https://www.who.int/teams/global-tuberculosis-programme/data

3.b. Data collection method

National TB Programmes report their annual TB data to WHO every year between March and June using a standardized online data reporting system maintained at WHO. The system includes real-time checks for data consistency. Estimates of TB burden are prepared in July-August and communicated with countries. In selected countries with new survey data, estimates are updated separately during the year. All estimates are communicated in August-September and revisions are done based on feedback. The final set of estimates is reviewed in WHO before publication in October, for compliance with specific international standards and harmonization of breakdowns for age and sex groups.

3.c. Data collection calendar

April-June each year

3.d. Data release calendar

October each year

3.e. Data providers

National TB Programmes, Ministries of Health

3.f. Data compilers

World Health Organization (WHO)

3.g. Institutional mandate

Several World Health Organization resolutions endorsed by Member States at different World Health Assemblies have given the World Health Organization responsibility for monitoring the burden of TB globally and reporting on the response:

Global strategy and targets for tuberculosis prevention, care and control after 2015, World Health Organization, 67th World Health Assembly, Resolutions and decisions, Resolution WHA 67.11, Geneva, Switzerland, 2014. https://apps.who.int/gb/ebwha/pdf_files/WHA67-REC1/A67_2014_REC1-en.pdf#page=25

Prevention and control of multidrug-resistant tuberculosis and extensively drug-resistant tuberculosis, World Health Organization, 62nd World Health Assembly, Resolutions and decisions, Resolution WHA 62.15, Geneva, Switzerland, 2009. https://apps.who.int/gb/ebwha/pdf_files/WHA62-REC1/WHA62_REC1-en-P2.pdf#page=25

Tuberculosis control: progress and long-term planning

World Health Organization. 60th World Health Assembly. Resolutions and decisions.

Resolution WHA 60.19. Geneva, Switzerland: WHO; 2007. https://apps.who.int/gb/ebwha/pdf_files/WHASSA_WHA60-Rec1/E/WHASS1_WHA60REC1-en.pdf#page=67

Sustainable financing for tuberculosis prevention and control

World Health Organization. 58th World Health Assembly. Resolutions and decisions.

Resolution WHA 58.14. Geneva, Switzerland: WHO; 2005. https://apps.who.int/gb/ebwha/pdf_files/WHA58-REC1/english/A58_2005_REC1-en.pdf#page=96

Stop Tuberculosis Initiative

World Health Organization. 53rd World Health Assembly. Resolutions and decisions.

Resolution WHA 53.1. Geneva, Switzerland: WHO; 2000. https://apps.who.int/gb/ebwha/pdf_files/WHA53-REC1/WHA53-2000-REC1-eng.pdf#page=18

Tuberculosis control programme

World Health Organization. 44th World Health Assembly. Resolutions and decisions.

Resolution WHA44.8. Geneva, Switzerland: WHO, 1991.

pdf, 76kb

4.a. Rationale

Following two years of consultations, a post-2015 global tuberculosis strategy was endorsed by the World Health Assembly in May 2014. Known as the End TB Strategy, it covers the period 2016-2035. The overall goal is to “End the global tuberculosis epidemic”, and correspondingly ambitious targets for reductions in tuberculosis deaths and cases are set for 2030 (80% reduction in incidence rate compared with the level of 2015) and 2035 (90% reduction in incidence rate), in the context of the SDGs.

The tuberculosis incidence rate was selected as an indicator for measuring reductions in the number of cases of disease burden. Although this indicator was estimated with considerable uncertainty in most countries in 2014, notifications of cases to national authorities provide a good proxy if there is limited under-reporting of detected cases and limited under or over-diagnosis of cases.

4.b. Comment and limitations

TB incidence has been used for over a century as a main indicator of TB burden, along with TB mortality. The indicator allows comparisons over time and between countries. Improvement in the quality of TB surveillance data result in reduced uncertainty about indicator values.

4.c. Method of computation

Estimates of TB incidence are produced through a consultative and analytical process led by WHO and are published annually. These estimates are based on annual case notifications, assessments of the quality and coverage of TB notification data, national surveys of the prevalence of TB disease and information from death (vital) registration systems.

Estimates of incidence for each country are derived, using one or more of the following approaches depending on available data: (i) incidence = case notifications/estimated proportion of cases detected; (ii) capture-recapture modelling, (iii) incidence = prevalence/duration of condition.

Uncertainty bounds are provided in addition to best estimates.

Details are available from TB impact measurement: policy and recommendations for how to assess the epidemiological burden of TB and the impact of TB control (https://www.who.int/publications/i/item/9789241598828) and from the online technical appendix to the WHO global tuberculosis report at https://www.who.int/teams/global-tuberculosis-programme/data.

4.d. Validation

Estimates of TB burden are prepared in July-August and communicated with countries. In selected countries with new survey data, estimates are updated separately during the year. All estimates are communicated in August-September and revisions are done based on feedback. The final set of estimates is reviewed in WHO before publication in October, for compliance with specific international standards and harmonization of breakdowns for age and sex groups.

4.e. Adjustments

The final set of estimates is reviewed in WHO before publication in October, for compliance with specific international standards and harmonization of breakdowns for age and sex groups.

4.f. Treatment of missing values (i) at country level and (ii) at regional level

• At country level

Details available in the technical appendix of each WHO Global Tuberculosis Report at https://www.who.int/teams/global-tuberculosis-programme/data

• At regional and global levels

Details available in the technical appendix of each WHO Global Tuberculosis Report at https://www.who.int/teams/global-tuberculosis-programme/data

4.g. Regional aggregations

Country estimates of case counts are aggregated. Uncertainty is propagated assuming independence of country estimates.

4.h. Methods and guidance available to countries for the compilation of the data at the national level

Available at Definitions and reporting framework for tuberculosis – 2013 revision (WHO/HTM/TB/2013.2). Geneva: World Health Organization; 2013 (https://www.who.int/publications/i/item/9789241505345, accessed 4 January 2021).

4.i. Quality management

All health statistics published by WHO undergo a systematic internal review process from the Data Division, including TB burden statistics. External review of specific statistics is conducted in various ways, including through country consultations and reviews by technical review bodies such as the WHO Task Force on TB Impact Measurement.

4.j. Quality assurance

The underlying TB data reported by WHO member states is carefully checked for completeness and internal consistency. Additional data sources are used in the process of disease burden estimation, including survey results, according to methods published in WHO documents mentioned in previous sections and cited in section 7.

4.k. Quality assessment

TB surveillance data are assessed systematically through so-called epidemiological reviews, which provide data quality scores used to update plans for strengthening TB surveillance and used in models to estimate the burden of TB. In addition, the data are reviewed internally for consistency. Data and estimates are published in the form of country profiles used in systematic consultations with countries,

as mentioned in previous sections and cited in section 7. Results are published in detail in publicly available annual global TB reports

5. Data availability and disaggregation

Data availability:

All countries

Time series:

2000 onwards

Disaggregation:

The indicator is disaggregated by country, sex and age group and five risk factors.

6. Comparability/deviation from international standards

Sources of discrepancies:

Population denominators may differ between national sources and United Nations Population Division (UNPD). WHO uses UNPD population estimates.

7. References and Documentation

URL:

https://www.who.int/teams/global-tuberculosis-programme/data

References:

The latest WHO Global Tuberculosis Report: https://www.who.int/teams/global-tuberculosis-programme/data, accessed 4 January 2021).

Definitions and reporting framework for tuberculosis – 2013 revision (WHO/HTM/TB/2013.2). Geneva: World Health Organization; 2013 (https://www.who.int/publications/i/item/9789241505345 accessed 4 January 2021).

TB Impact measurement: Policy and recommendations for how to assess the epidemiological burden of TB and the impact of TB control (WHO/HTM/TB/2009.416). Geneva: World Health Organization; 2009 (https://www.who.int/publications/i/item/9789241598828).

World Health Assembly governing body documentation: official records. Geneva: World Health Organization (https://apps.who.int/gb/or/, accessed 21 June 2016).